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| **Name:** | Molly Zeins (mollyzeins@gmail.com) | | | | **Date:** | March 25, 2011 | | | |
| **Lesson:** | 9.08 Environmental Policy –Oil Spill | | | | **Subject:** | American Government | | | |
| **Type of Lesson:** | **( ) Introductory ( ) Developing ( X ) Maintaining ( ) Refining ( X ) Enriching ( ) Reviewing** | | | | | | | | |
| **VSC:** | ***Government Standard:***  3.1.2 Analyze the role of the government in addressing environmental issues  ***Biology Standards:***  1.3.1 The student will develop and demonstrate skills in using lab and field equipment to perform investigative techniques.  1.2.7 The student will use relationships discovered in the lab to explain phenomena observed outside the laboratory. | | | | | | | | |
| **Objective:** | Students will be able to describe the government actions required during environmental catastrophes such as oil spills by creating and cleaning up an oil spill and completing a RAFT assignment. | | | | | | | | |
| **Agenda:** | | | **Key Points:** | | | | | **Materials:** | |
| 1. Call to Order 2. Introduction to Lab Materials 3. Modeling of Lab 4. Oil Spill/Lab Completion 5. Clean Up 6. Post-Lab Questions 7. RAFT Assignment 8. Assignment collection | | | Competing goals for land use affect the sustainability o a country’s development.  There must be some government restrictions on businesses in order to preserve the environment. | | | | | Oil  Water  Trays  Cups  Feathers  Dawn Soap  Lab Write Up Sheet  Reflection Questions  Feed of Deep Water Horizon Oil Spill | |
| **Call To Order: (5 minutes)** | | | | | | | | | **Accommodations:** |
| Students will be greeted at the door, take a lab report sheet, and get started on the call to order, which will be projected on the board:  *Why do birds have feathers? What functions do feathers help birds perform?* | | | | | | | | | Seats will be assigned based on academic and behavioral needs.  Verbatim instructions will be provided. |
| **Refresh and Review: (10 minutes)** | | | | | | | | | |
| Teacher will review the definition and goals of environmental policy by asking a volunteer to read from the background information provided:  **Environmental Policy: Putting restrictions on individuals and businesses to solve problems of pollution, deforestation, and environmental destruction.**  **Goals:**   1. **Preserve wetlands and natural resources** 2. **Protect the ecosystem**   Teacher will set the purpose for the lesson by giving a background of the Deepwater Horizon spill in a film clip. Teacher will question students to determine the purpose of the lesson:  **What impact will the oil spill have on the ecosystem?**  **What policies should the government make to prevent the impact on the ecosystem?** | | | | | | | | |  |
| **Introduction to New Material: (10 minutes)** | | | | | | | | | |
| ***Procedure:*** | | | | ***Notebook Product:*** | | | | | Verbatim reading of all instructions. |
| Teacher will have a student read the **objective**, which is on the board.  Teacher will have students share out on the purpose of feathers. Teacher will make sure that students do not overlook any of the purposes:  **-keeping the birds warm**  **-aiding in flight**  **-protecting the skin of the bird from toxins**  Students will take thirty seconds to supplement their lab report with the class findings.  Teacher will model how to draw and label the feather.  🡪 Students will also draw and label the feather.  Teacher will model the procedures of the oil spill lab. | | | | For the sake of time, momentum and organization, students will not use notebooks today and instead use their lab sheets. | | | | |
| **Guided Practice: (30 minutes)** | | | | | | | | | |
| Teacher will walk around and circulate while students follow the procedures in the lab sheet. Students will complete the lab and record their results.   * Lab investigation:   + students observe a feather   + dip feather in water   + students time how fast it dries   + dip feather in oil   + students time how fast it dries, up to 3 minutes   + wash feather with soap and water   + students time how fast it dries, up to 3 minutes   + make observations as we go along   + Thought questions: How do oil spills affect birds? How do human actions harm the environment | | | | | | | | |  |
| **Laboratory Debrief: (10 minutes)** | | | | | | | | | |
| Teacher will bring attention back from class and debrief the lab activity. Teacher will question students in order to reach understanding of the detriments of an oil spill on the environment and larger ecosystem:  **How fast did it take for your feather to dry?**  **Why do you think it dried so fast?**  **What did you feather look like when it was dipped in oil?**  **How do you think the oily feather would affect the feather’s function?**  **What did the feather look like after you cleaned it with soap?**  **How fast did it take to dry feather once you cleaned it?**  **Compare your beginning feather to your end feather. Is your feather as functional as it was before we started the laboratory?**  **What government policies should be in place so that ecosystems are preserved? Should these policies be preventative (before the event) or responsive (reacting to the disaster) or both?** | | | | | | | | |  |
| **Independent Practice: (20 minutes)** | | | | | | | | | |
| Students will complete the reflection questions on their worksheets. Teacher will conduct a think aloud in order to reflect on the differences in timing of the drying of the feathers.  Students will complete a RAFT assignment that demonstrates understanding of the objective. | | | | | | | | | Verbatim instructions will be provided. |
| **Extension and Closure: (5 minutes)** | | | | | | | | | |
| If time permits, the teacher will propose that students separate the oil and the water for use by the next class.  Teacher will question students on the ability to perform such a task.  Teacher will have students clean up and set up the activity for the next class. | | | | | | | | |  |
| **Rigor:** | | **Engagement:** | | | | | **Intervention:** | | |
| Questioning will be used to have students explore the environmental impact of government policies or lack of government policies. | | Students will have a hands on learning opportunity to explore the impact an oil spill can have on our ecosystem. | | | | | Doing the questions orally before writing them down will help give all students the opportunity to both internally and externally process information. | | |